

of the lining membranes. These cases complain of headache, pain over the sinuses, and of postnasal discharge. Sinuses that contain free pus and are not draining should not be treated by x-ray but by the usually accepted procedures. After drainage has been accomplished, radiation may be used in addition to the prescribed treatment. Radiation therapy is of value in treating children, especially in those cases in which the physician hesitates to recommend surgery. Frequently a great deal can be accomplished for patients with sinus disease whose symptoms persist despite numerous surgical procedures. Following radiation, there is usually both subjective and objective improvement. The patient's symptoms disappear, and follow-up roentgenograms will show clearing of the sinuses. Occasionally there is an increase in the nasal secretion the first day or two after treatment.

It is not our contention that all cases of sinusitis should be treated with x-ray therapy. The coöperation of the otorhinolaryngologist is invaluable, and he is best qualified to determine which cases are suitable for treatment with radiation. Certainly, cases should not be treated indiscriminately. X-ray therapy will not cure all cases of sinusitis, but it is, nevertheless, a valuable adjunct in treatment, and worthy of recommendation in selected cases.

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CALIFORNIA'S FIGHT AGAINST TUBERCULOSIS

The physician knows perhaps better than anyone else of the insidious nature of tuberculosis—of the importance of early diagnosis and of early treatment. Even today, too many deaths are caused by advanced cases of tuberculosis—cases which, had they been brought to the attention of the physician earlier, might have been cured.

The promotion of the early diagnosis of tuberculosis is one of the chief objectives of the sixty-three affiliated tuberculosis associations throughout California. The state-wide program, supported by the annual sale of Christmas Seals, provides for the prevention of tuberculosis through the use of the tuberculin test, the x-ray, and follow-up nursing programs. To date, these case-finding methods have been carried on almost exclusively among school populations, and during the past three years more than 270,000 school children have been examined for tuberculosis. The most recent survey, that of 70,000 in California schools, revealed approximately 300 cases of adult type tuberculosis—275 of these among the students themselves, and twenty-five among teachers and other school employees.

A large number of the county tuberculosis associations in California have inaugurated follow-up nursing programs to supplement their local tuberculin testing surveys. In these, the public health nurse brings the parents, relatives and friends of students found to be infected to their family physician for examination, and every effort is made to uncover the source of infection. Numerous unknown cases are brought to medical attention in

this manner. The early discovery of active cases of disease by the public health nurse and the family physician is not only an important factor in reducing the annual death toll from tuberculosis—4,428 lives every year in California alone—but it is also important in preventing the spread of infection to others in that community.

However, as large numbers of the school population are being examined and safeguarded against the spread of tuberculosis, the next task appears to be in industry—a field in which little, as yet, has been accomplished. Tuberculosis is basically a problem of the working man—it claims its highest toll between the ages of 15 and 45—and may be termed a disease of industry. It is the outstanding chronic disease of industrial workers. The challenge of the early diagnosis of this disease among industrial groups is perhaps the largest tuberculosis control problem facing California today.

To bring the private practitioner in California a fuller understanding of diagnostic techniques the present plan of consultative clinics conducted by the California Tuberculosis Association, upon the invitation of the local county medical society, has been of far-reaching importance. These clinics have been held in over thirty counties to date, and have given local physicians the opportunity of conferring with chest specialists upon difficult problems in diagnosis.

It is toward the early diagnosis of tuberculosis that California's sixty-three local tuberculosis associations are striving, and for which these associations conduct their annual sale of Christmas Seals.

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Death and the Workers.—As a consequence of the triumphs of science and their application in the health field we find this startling contrast in mortality data: fifty years ago 94 per cent of all mortality from disease was from acute illness, chiefly infectious; today 75 per cent of all mortality from disease is from chronic illness. Ten diseases take this toll of three out of four of our deaths. Listed according to the death rates for which they are responsible are: Heart disease, cancer, pneumonia and influenza, cerebral hemorrhage, nephritis, tuberculosis, diabetes, diarrhea and enteritis, appendicitis and syphilis. From seven of these ten diseases—all but cerebral hemorrhage, diabetes, and appendicitis—the death rates mount steadily as income goes down.

The death rate from respiratory tuberculosis is seven times greater among unskilled workers than among professional workers; three times greater among skilled workers than among the professional. Death rates from diarrhea and syphilis are twice as high for the unskilled as the professional; cancer's toll of the unskilled worker is 50 per cent higher than of the professional. The death rate from all causes is more than twice as high for the unskilled worker as for the professional.—Roche.

Disinfection of Diphtheria Bacillus Carriers.—After reviewing some of the methods formerly recommended for the disinfection of diphtheria carriers, and after pointing out some of their shortcomings, Meyer describes his own method.

He applies a 3 per cent alcoholic solution of methyl violet by means of a cotton compress to the tonsils and to the nasal mucous membrane. This solution not only spreads rapidly over the surface but also enters the folds and crypts. The only disadvantage of the solution is that it stains. The applications are made two or three times weekly.—*Journal of the American Medical Association.*